

IN THE CLAIMS

This is a complete and current listing of the claims, marked with status identifiers in parentheses. The following listing of claims will replace all prior versions and listings of claims in the application.

1. (Currently Amended) Method for providing a shaped biodegradable elastomeric structure, comprising:

____forming at least one of homopolymers and/or copolymers of 1,3-trimethylene carbonate (TMC) into a desired shape; and
____irradiating said desired shape with actinic radiation in an inert atmosphere for crosslinking.

2. (Currently Amended) Method according to claim 1, wherein the at least one of the homopolymer and/or copolymer of 1,3-trimethylene carbonate (TMC) ~~is/are characterized by~~includes a number average molecular weight (M_n) greater than 10,000, ~~preferably between 10,000 to 300,000, and more preferably between 50,000 to 200,000.~~

3. (Currently Amended) Method according to claim 1 ~~or claim 2~~, wherein the copolymer of 1,3-trimethylene carbonate (TMC) is chosen from the group consisting of 1,3-trimethylene carbonate (TMC) (co)polymers with lactones ~~(cyclic esters)~~, cyclic carbonates, cyclic ethers, cyclic anhydrides, and cyclic depsipeptides ~~(morpholine 2,5-dione derivatives)~~.

4. (Currently Amended) Method according to ~~any of the claims 1-3~~claim 1, wherein the copolymer of 1,3-trimethylene carbonate (TMC) is chosen from the group consisting of a statistical copolymer, a random copolymer, an alternating copolymer, a block polymer, a diblock copolymer, a triblock

copolymer, a multiblock copolymer, a star-shaped block copolymer, and a graft block copolymer.

5. (Currently Amended) Method according to ~~any of the claims 1-4~~claim 1, wherein the copolymer of 1,3-trimethylene carbonate (TMC) is chosen from the group consisting of 1,3-trimethylene carbonate (TMC) (co)polymers with polyethylene oxide (PEO), polyethylene glycol (PEG) and ϵ -caprolactone (CL).

6. (Currently Amended) Method according to ~~claim 1 any of the claims 1-5~~claim 1, wherein the copolymer of 1,3-trimethylene carbonate (TMC) is chosen from the group consisting of 1,3-trimethylene carbonate (TMC) (co)polymers with ϵ -valerolactone, 1,5-dioxepane-2-one, and ϵ -caprolactone.

7. (Currently Amended) Method according to ~~claim 1 any of the claims 1-6~~claim 1, wherein the copolymer of 1,3-trimethylene carbonate (TMC) is poly(1,3- ϵ -trimethylene carbonate-co- ϵ -caprolactone) (poly(TMC-CL)).

8. (Currently Amended) Method according to ~~any claim 1 of the claims 1-7~~claim 1, wherein the actinic radiation is chosen from the group consisting of gamma radiation, high-energy UV radiation and electron radiation, preferably gamma radiation.

9. (Currently Amended) Method according to ~~claim 1 any of the claims 1-8~~claim 1, wherein the actinic radiation is gamma radiation and the irradiation dosage is 5-100 kGy, ~~preferably 10-45 kGy~~.

10. (Currently Amended) Method according to ~~claim 1 any of the claims 1-9~~claim 1, wherein the inert atmosphere is obtained by ~~means use of~~ a reduced pressure of less than 10^4 Pa.

11. (Currently Amended) Method according to claim 1 ~~any of the claims 1-10~~, wherein the inert atmosphere is obtained by means use of an inert gas, ~~preferably nitrogen~~.

12. (Currently Amended) Method according to ~~any of the claims 1-11~~ claim 1, ~~characterized by~~ wherein a creep rate of the provided shaped biodegradable elastomeric structure ~~of is~~ is less than 10% of the yield stress.

13. (Currently Amended) Method according to ~~any of the claims 1-12~~ claim 1, ~~characterized by~~ wherein a degree of swelling of the provided shaped biodegradable elastomeric structure ~~of is~~ is less than 400% in chloroform.

14. (Currently Amended) Method according to ~~any of the claims 1-13~~ claim 1, ~~characterized by~~ wherein a gel fraction of the provided shaped biodegradable elastomeric structure ~~of is~~ is more than 10% by weight.

15. (Currently Amended) Method according to ~~any of the claims 1-14~~ claim 1, further comprising sterilization ~~of sterilizing~~ the provided shaped biodegradable elastomeric structure, ~~preferably in an autoclave~~.

16. (Currently Amended) Shaped biodegradable elastomeric structure obtainable by a method according to ~~any of the claims 1-15~~ claim 1.

17. (Currently Amended) A method, comprising:
using ~~Use of~~ a shaped biodegradable elastomeric structure according to claim 16 in or as at least one of an implant, ~~and/or a matrix and/or a support device~~.

18. (Currently Amended) A ~~Medical~~ medical implant, ~~and/or matrix and/or support device comprising:~~

-a shaped biodegradable elastomeric structure according to claim 16.

19. (New) Method according to claim 1, wherein the at least one of the homopolymer and copolymer of 1,3-trimethylene carbonate (TMC) includes a number average molecular weight (M_n) between 10,000 to 300,000.

20. (New) Method according to claim 1, wherein the at least one of the homopolymer and copolymer of 1,3-trimethylene carbonate (TMC) includes a number average molecular weight (M_n) between 50,000 to 200,000.

21. (New) Method according to claim 1, wherein the actinic radiation is gamma radiation and the irradiation dosage is 10-45 kGy.

22. (New) Method according to claim 1, wherein the sterilizing of the provided shaped biodegradable elastomeric structure is done in an autoclave.

23. (New) A matrix, comprising:
a shaped biodegradable elastomeric structure according to claim 16.

24. (New) A support device, comprising:
a shaped biodegradable elastomeric structure according to claim 16.